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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/549,877

12/19/2005

Miles Stephen Cain

43191

5886

9629 7590 03/05/2008  
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EXAMINER

CHANG, VICTOR S

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

03/05/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/549,877	<b>Applicant(s)</b> CAIN ET AL.	
	<b>Examiner</b> Victor S. Chang	<b>Art Unit</b> 1794	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 February 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13, 16, 17 and 20-47 is/are pending in the application.
- 4a) Of the above claim(s) 4-13, 16 and 17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 20-47 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Introduction***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/5/2008 has been entered.
2. Claim 1 has been amended. Claims 1-3 and 20-47 are active.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. In response to the amendments, the grounds of rejection have been updated as set forth below.

### ***Claim Rejections - 35 USC § 103***

5. Claims 1-3 and 20-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. [US 2002/0120972 A1] in view of Furuno et al. [US 6200195 B1].

Nakamura's invention relates to a clothing (fabric) with a sag-preventive (non-slip or adhesive) member [0001], such as socks, stockings, brassieres, under short pants, pantyhose, swimming wear, sport wear, etc. The sag-preventive member may be installed on the inner surface of the stocking in the vicinity of the opening, or on the inner circumferential surface of the brassiere [0028]. Fig. 2 shows that the sag-preventive member is installed by laminating a

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layer sheet 1 (which comprises a flexible hot-melt film layer 11 and an adhesive layer 12) on the clothing layer 2 under a heating device 4. The film layer 11 is melted and welded on the clothing [0052-0053]. Useful adhesive layer may be polymeric materials, such as silicone, etc. [0037]. The hot melt flexible film layer avoids exuding a liquid silicone rubber on the outer surface of the clothing thereby maintaining its appearance [0066].

For claims 1 and 2, the cloth layer 2, flexible hot-melt film layer 11, and adhesive layer 12 of Nakamura read on the fabric layer, barrier layer, and adhesive layer of the claimed invention. The liquid silicone rubber is interpreted as uncured silicone gel prior to heat lamination. Nakamura lacks teachings of that the barrier layer is a silicone elastomer. However, Furuno's invention relates to an adhesive pad for adhering to human skin [col. 1, lines 5-7]. The adhesive pad is formed by 1) initially curing a silicone rubber to a semi-cured stage capable of shape retention; then 2) integrally curing the semi-cured silicone rubber layer and an uncured silicone gel in a heated mold. Fig. 2 shows that the cured article 1 comprises a pad body silicone rubber (elastomer) layer 2 and cured silicone gel adhesive layer 3 [col. 1, lines 64-66 and col. 2, lines 32-48]. It would have been obvious to one of ordinary skill in the art to substitute the bonding film layer 11 and adhesive layer 12 of Nakamura with the semi-cured silicone rubber layer (curable barrier layer) and uncured silicone gel layer of Furuno, with a reasonable expectation of success at the time the invention was made, because the selection of a functionally equivalent known material based on its suitability for its intended use supported a *prima facie* obviousness determination. Finally, since Nakamura teaches that the hot melt flexible film layer avoids exuding a liquid silicone rubber on the outer surface of the clothing, and Furuno teaches

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discrete cured layers, the combined teachings of prior art clearly read on the newly added term “an impervious barrier layer”.

For claim 3, a workable melt viscosity of the curable silicone rubber layer is deemed to be an obvious routine optimization to one of ordinary skill in the art of hot melt lamination, motivated by the desire to avoid extruding the low viscosity silicone gel on the outer surface of the clothing.

For claims 20-31, since the combined teachings of prior art render the subject matter of the instant invention obvious, and they are of the same use, workable thicknesses of the barrier layer and adhesive layer are deemed to be obvious routine optimizations for the same utility.

For claims 32-47, Nakamura relates to a clothing (fabric) with a sag-preventive member, including brassieres, as set forth above.

### ***Response to Arguments***

6. Applicants argue at Remarks pages 7-8 that

“no barrier layer is present or is necessary in EP '310 because the adhesive is cured before the layer sheet (consisting of the film layer and adhesive layer) is applied to the clothing... Therefore, because the adhesive is cured before application to the clothing, the barrier layer as recited in claim 1 is not disclosed or required by EP '310.”

However, Nakamura (equivalent to EP '310) teaches two methods for installing the sag-preventive member to clothing: sewing and heat curing/welding. Clearly, the pre-cured layer sheet is for sewing, not for the relied upon method of heat curing/welding.

Applicants argue at page 8 that

“EP '310 explains that the layer sheet is provided with vent holes which cover 5% to 85% of the surface area of the layer sheet. If the adhesive layer were not cured when the layer sheet was applied to the clothing of EP '310 - or if the adhesive layer were applied to the

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film layer after the film layer was attached to the clothing - the film layer would not prevent absorption of the adhesive into the clothing because of all the vent holes. For at least these reasons, the barrier layer recited in claim 1 is patentably distinguished from the film layer of EP '310.

However, the claim language does not exclude the presence of “vent holes” in the barrier layer.

Applicants argue at page 8 that

"claim 1 has been amended to recite that the barrier layer is impervious. Although this modification is redundant in that the barrier layer is already required to prevent absorption of the adhesive silicone gel coating, we add the term to reinforce the distinctions between the recited claims and EP '310."

However, , since Nakamura teaches that the hot melt flexible film layer avoids exuding a liquid silicone rubber on the outer surface of the clothing, and Furuno teaches discrete cured layers, the combined teachings of prior art clearly read on the newly added term “an impervious barrier layer”.

### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor S. Chang whose telephone number is 571-272-1474. The examiner can normally be reached on 7:00 am - 5:00 pm, Tuesday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Victor S Chang/  
Primary Examiner, Art Unit 1794